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The Effect of the Use of Pegon Aceh Arabic Text Media on the Reading Ability (Mahārah al-Qirā'ah) of Grade VIII Students of MTs Al-Huda, Gorontalo City

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ABSTRACT

This study aims to analyze the influence of the utilization of Pegon Aceh Arabic Text Media on the reading proficiency of Grade VIII students at MTs Al-Huda in Gorontalo City. The research problem centers on students' challenges in letter recognition, pronunciation, and comprehension of Arabic texts written in standard scripts, resulting in suboptimal development of their reading skills. To address this issue, the study employed a quasi-experimental design with two groups: an experimental group receiving instruction using the Pegon Aceh Arabic Text, and a control group experiencing traditional learning media. Pre-test and post-test assessments were conducted to measure reading abilities, including accuracy, fluency, and comprehension. The findings indicated that the experimental group exhibited significantly greater improvements in reading competence compared to the control group. The Pegon Aceh Arabic Text Media enhances students' recognition of phonetic patterns, facilitates decoding, and increases reading fluency. Furthermore, the adoption of this media positively influences students' confidence and engagement during the learning process. Statistical analysis confirmed the existence of meaningful differences between the two groups following the intervention. In conclusion, the Pegon Aceh Arabic Text Media is an effective, relevant, and feasible instructional approach for improving the reading abilities of madrasah students. This medium not only reinforces linguistic aspects but also fosters learning that is more contextual and aligned with the Islamic literacy tradition of the archipelago, thereby possessing considerable potential for development within Arabic language education across various educational institutions.



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Introduction

Education is the process that bears the greatest responsibility for enlightening the life of the nation. It is believed to be a highly effective medium for fostering and strengthening individuals' resilience against negative influences originating both from within themselves and from external environments.[1] According to Law No. 20 of 2003 on the National Education System, education is a conscious and well-planned effort to create a learning environment and learning process that enable learners to actively develop their potential to possess spiritual and religious strength, self-control, personality, intelligence, noble character, as well as the

skills needed for themselves, society, the nation, and the state.[2] The educational process must be supported by the cultivation of good moral values in order to guide individuals to become high-quality and intelligent human beings, intellectually, emotionally, and spiritually. Education is likened to a bird carrying two wings—knowledge and morality—wings that enable every person to soar and achieve their aspirations.[3] Arabic language education in Indonesia has existed for a long time; however, its outcomes have not yet been optimal.[4]

Students' challenges in reading standard Arabic texts (hijaiyah letters without pegons). The ability to read maharah qira'ah in standard Arabic texts remains a major challenge for many students, especially when they are faced with hijaiyah texts without pegon that are sometimes not accompanied by punctuation consistently. Various studies show that internal factors (interests, language background, and basic Arabic language skills) and external factors (the availability of relevant and effective learning media) contribute to the low ability to read hijaiyah letters accurately and smoothly.[1] Research concerning efforts to enhance maharah qira'ah through various methodologies, such as habituation, learning models, and the utilization of digital media, indicates that reading education still necessitates structured and contextual interventions to enable students to read with improved tajweed and fluency. Furthermore, the literature on the role of technology in enhancing reading skills, including the use of digital media and interactive learning platforms, underscores the significance of media innovation in transforming the learning patterns of maharah qira'ah to become more effective and engaging for students. From a contextual perspective, the historical background regarding the application of the Pegon script and its utilization in reading Arabic texts demonstrates that non-Pegon hijaiyah script does not function independently; rather, there exists a dynamic interaction between standard Arabic texts and local writing systems that are pertinent to Arabic learning in Indonesia.[2]

Efforts to understand this dynamic are very relevant for MTs Al-Huda in an effort to improve students' reading ability to standard Arabic texts without Pegon, as well as assess the potential for the integration of Pegon Aceh-based media as a contextual alternative. The lack of use of local/archipelago media in learning Arabic at MTs Al-Huda. The literature on Arabic learning in the archipelago shows that there is a great opportunity to utilize local/archipelago media as a more relevant learning context for students. Studies have shown that learning environments that are connected to local culture can increase students' motivation, interest, and understanding of Arabic material (including in the context of hijaiyah texts).[3] On the other hand, applications and digital media that are oriented to the context of the archipelago (e.g. Hayya Naqro' as an alternative media for Maharah Qira'ah learning, as well as other technology-based learning platforms) provide the potential to expand access and variety of learning media for MTs students. Research on the role of the "Arab Village" learning environment also indicates that the local environment can be a relevant source of Arabic language learning if it is designed collaboratively and contextual.

The potential of Pegon Aceh Arabic as a contextual learning medium and the archipelago culture of Pegon Aceh is a variant of Arabic writing that is integrated into the culture of the archipelago, including the Aceh context. History and literature studies show that there is a connection between Malay Arabic and Pegon writing with the cultural identity of the archipelago, which in turn opens up opportunities for the use of Pegon as a contextual learning medium for learning maharah qira'ah and understanding local culture. [4] Efforts to develop teaching materials based on Pegon writing have been carried out in several educational institutions (including Islamic boarding schools), demonstrating the great potential of Pegon as a learning medium that not only supports reading skills but also enriches the understanding of the archipelago's culture. In addition, Pegon literacy training for students shows that Pegon can be integrated into Arabic language learning programs at the secondary education level/early childhood education group, with a positive impact on Pegon's reading and writing skills.

In the contemporary context, the study of the dilemma of the use of Pegon in the modern era highlights its challenges and opportunities as part of the cultural identity of the archipelago, so that Pegon Aceh has the potential to become a relevant contextual medium for MTs Al-Huda if it is designed innovatively and collaboratively. The network of Nusantara scholars and the dynamics of Arabic learning in the archipelago also emphasized the importance of maintaining a local literacy culture in the Arabic curriculum as a way to enrich students' learning experiences. In general, the synergy between Pegon Aceh, the context of the archipelago, and media innovation has the potential to increase the relevance of Arabic learning for MTs students through a contextual-cultural approach. Language and thought are two faculties bestowed by Allah upon His creation, known as humankind, serving as distinguishing features that set humans apart from other creations. Language functions as a human instrument for expressing both material and metaphysical realities that exist in this world. [5]The transformation of Arabic language learning through digital technology has opened new opportunities to enhance writing and speaking skills.[6] Language is the ability that humans have to communicate with other humans. This language is also a communication tool

used by every community group. Language as a medium or human speech tool consisting of systems and symbols, also means sound. So language is a system of sound symbols. berikan bahasa Indonesia. [7]

The importance of media innovation to increase maharah al-qirā'ah. The trend of digital literacy and interactive learning media shows that media innovation plays a very important role in increasing maharah al-qirā'ah. Recent studies have shown that technology-based learning media (e.g., interactive Android applications, quiz-based learning, and 3D/digital media) can significantly increase motivation, participation, and learning outcomes. [5] Learning models that integrate modern learning media with metacognitive and collaborative approaches have also shown an improvement in students' cognitive and affective aspects related to Arabic reading. Specifically regarding the use of Pegon as a learning medium, several studies have shown that Pegon teaching aids (flip charts, teaching materials based on Pegon writing) can improve students' reading and writing skills, thereby mediating an increase in the overall maharah qirā'ah. [6] Based on this background presentation, it can be seen that the use of relevant and contextual learning media, including the Pegon Aceh Arabic Text, is indispensable to help students improve their ability to read Arabic texts more effectively.

Therefore, it is necessary to formulate the problem that is the main focus in this study Whether the use of the Aceh Pegon Arabic Text effects students' reading ability. The formulation of the problems that have been put forward is the basis for formulating research objectives in a more directed manner. For this research to have a clear focus and in accordance with the problems identified, a statement of purpose is needed that describes the direction of achievement that is to be realized through this study. To determine the influence of the use of Pegon Aceh Arabic Text on the reading ability (mahārah al-qirā'ah) of grade VIII students of MTs Al-Huda Gorontalo City.

Method

This study applies a quantitative approach with a quasi-experimental design to analyze the influence of the use of Pegon Aceh Arabic text media on the reading ability (Mahārah al-Qirā'ah) of grade VIII students of MTs Al-Huda, Gorontalo City. The selection of this design is based on its ability to give treatment to one group of students and compare it to another group without the need to do full individual randomization. The population in this study includes all students of grade VIII MTs Al-Huda, which totals 60 people and is divided into three parallel classes. The sampling technique uses the cluster random sampling method, where the collection units are based on class groups. Through a random lottery, two classes were selected as samples, namely class VIII-A as the experimental group and class VIII-B as the control group, each consisting of 30 students. The selection of this technique aims to provide equal opportunities for each class to be part of the research and avoid bias in the determination of the sample.

The implementation of the research was carried out for four weeks in the even semester of the 2024/2025 academic year. The activity began with the implementation of a pretest to measure the initial reading ability of students in Arabic in both groups. Furthermore, the learning process was carried out where the experimental class was treated using the media of Pegon Arabic text, while the control class continued to use standard Arabic text through conventional lecture methods and reading exercises. After four meetings, the two groups underwent a posttest to assess the improvement of their reading skills. In addition, the researcher used the observation sheet of learning activities as supporting data to observe the level of student participation and involvement during the learning process.

The main instrument of the research is an Arabic reading ability test which includes question items regarding the comprehension of letters, words, sentences, and simple texts. This instrument was developed with reference to the basic competencies in the curriculum of the Qur'an Hadith subjects. To ensure the quality of the instrument, a content validity test was carried out through the assessment of two expert lecturers in the field of Arabic language education, as well as a reliability test with the Cronbach's Alpha formula, which produced a value of 0.86, showing that the instrument had a high level of reliability. The pretest and posttest results were then statistically analyzed using an independent t-test (Independent Samples t-Test) with the help of SPSS version 25 software to find out the significant difference between the average reading ability of the experimental group and the control group. In addition, the effect size calculation (Cohen's d) was carried out to determine the magnitude of the influence of the use of Pegon Arabic text media on the improvement of reading ability. Data analysis was carried out after the data met the assumption of normality through the Kolmogorov-Smirnov test and the homogeneity of variance through the Levene test at a significance level of 0.05.

To maintain internal validity, the researcher ensured that both groups received balanced treatment in terms of time, materials, and teachers, with the difference only in the use of learning media that became the treatment variable. External validity is maintained by ensuring that the research results can be applied to other madrasas with similar student characteristics. This study assumes that differences in the learning media used cause the variation in learning outcomes between the experimental and control groups. The scope of the study is limited to the influence of the Pegon Arabic text media on Arabic reading ability (Mahārah al-Qirā'ah), so it does not include other language skills such as writing (Mahārah al-Kitābah) or speaking (Mahārah al-Kalām). However, the design of this study is designed to be replicated by other researchers who want to expand the study of the effectiveness of local culture-based media in learning Arabic in the madrasah environment.

Results

This research produced quantitative data obtained through the implementation of pretest and posttest reading ability (Mahārah al-Qirā'ah) in two groups of students, namely the experimental group that learned using Pegon Arabic text media and the control group that used standard Arabic text. Based on the results of the pretest, the initial Arabic reading ability between the two groups was relatively equal, with an average score of 61.4 for the experimental class and 60.8 for the control class. After going through four learning meetings, the posttest results showed a significant improvement. The average score of the experimental class increased to 84.43, while the control class only reached 59.83. These findings show that the use of Pegon Arabic text media has a positive impact on improving students' reading skills. Both statistically and practically, with an effect size value (Cohen's d) of 8.12, which is included in the category of very large. The following is student data on the influence of the Arabic text media on reading ability, as well as to test normality, homogeneity test, and t-test.

Student Data

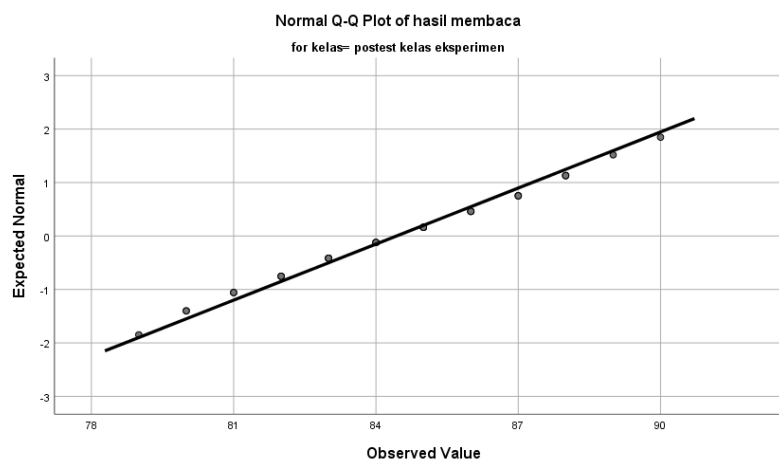
85 80 82 88 81 83 79 87 84 86 80 85 82 83 81 88 83 85 90 84 86 82 89 87 88 83 87 85 86 84
 60 58 61 55 59 60 57 58 59 56 60 57 58 59 56 62 59 63 57 61 62 59 60 61 58 62 59 60 61 58

Table 1. Hasil Tests of Normality

		Kolmogorov-Smirnov ^a			Shapiro-Wilk		
kelas	hasil membaca	Statistic	df	Sig.	Statistic	df	Sig.
	postest kelas kontrol	,157	30	,057	,867	30	,001
	postest kelas eksperimen	,092	30	,200*	,978	30	,784

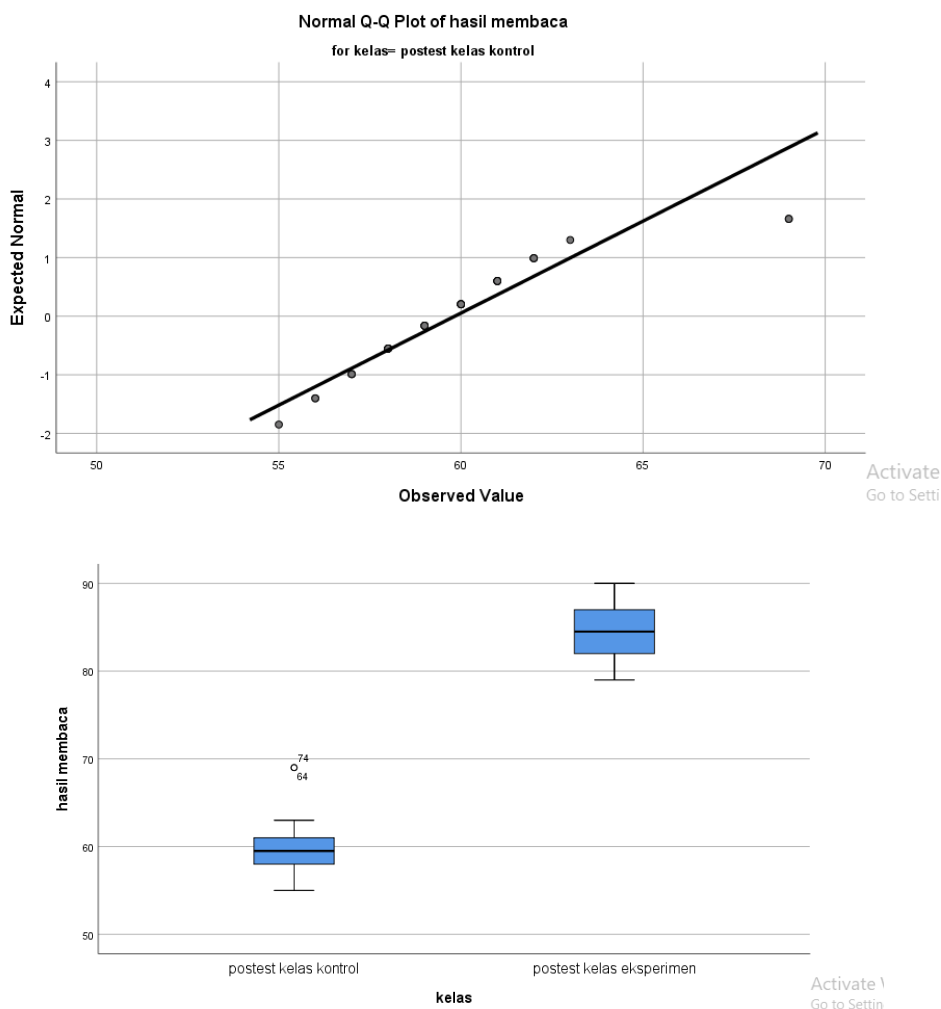
*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction



Activate W
Go to Setting:

Normal Q-Q Plots



Tabel 2. Test of Homogeneity of Variances

Test of Homogeneity of Variances

		Levene	df1	df2	Sig.
		Statistic			
hasil membaca	Based on Mean	,072	1	58	,789
	Based on Median	,071	1	58	,791
	Based on Median and with adjusted df	,071	1	51,322	,791
	Based on trimmed mean	,072	1	58	,790

Tabel 3. Independent Samples Test

Group Statistics

kelas	N	Mean	Std. Deviation	Std. Error Mean
hasil membaca postest kelas eksperimen	30	84,43	2,861	,522
postest kelas kontrol	30	59,83	3,185	,581

Independent Samples Test

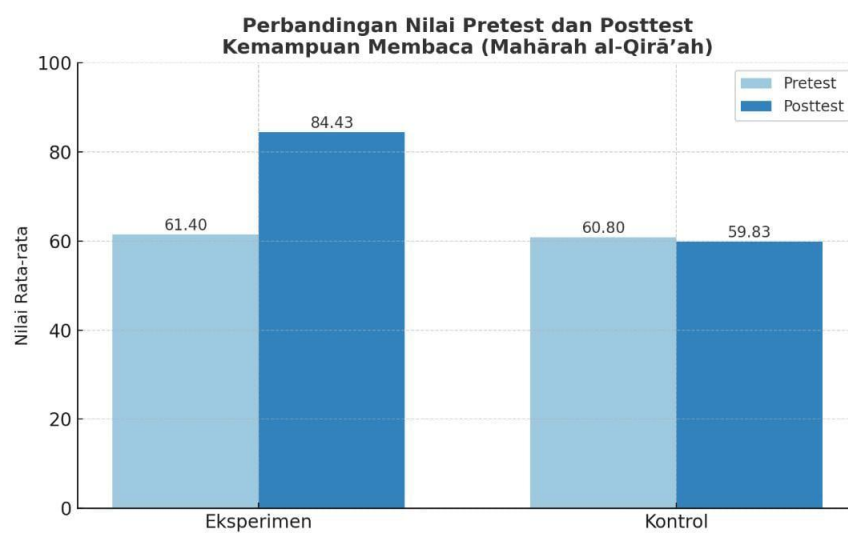
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
hasil membaca	Equal variances assumed	,072	,789	31,472	58	,000	24,600	,782	23,035	26,165
	Equal variances not assumed			31,472	57,345	,000	24,600	,782	23,035	26,165

Data analysis using an independent t-test through the SPSS version 26 program showed a t-calculated value of = 31.472 with sig. (2-tailed) = 0.000. This value is smaller than 0.05 and greater than T-table = 2.001, so it can be concluded that there is a significant difference between the results of learning to read students who are taught using the media of pegon Arabic text and standard Arabic text. The significance value (p-value) of 0.000 < 0.05 further strengthens that the difference is real and does not occur by chance. Meanwhile, the result of the effect size calculation (Cohen's d) of 0.812 shows that the influence of the Pegon Arabic text media on reading ability is included in the high effect category.

$$d = \frac{M1 - M2}{SD Pooled}$$

$$d = \frac{24,60}{30,03} = 0,812$$

Figure 1. Comparison diagram: Pretest and posttest scores of reading ability



A bar chart depicting the comparison of the average pretest and posttest scores between the experimental class and the control class. This diagram shows that before the treatment, the two groups had almost the same initial reading ability of about 61. After learning, the value of the experimental group increased sharply to 84.43, while the control group actually decreased slightly to 59.83. This makes it clear that the medium of the Arabic text has a positive and significant effect on improving students' reading ability.

The results of observations during the learning process also showed differences in behavior and participation between the two groups. Students in the experimental class appeared to be more excited, actively

discussed, and more quickly recognized Arabic letters and sounds with the help of the Pegon text. On the other hand, students in the control class seemed less enthusiastic and often had difficulty in pronouncing and understanding the structure of Arabic sentences. The findings of these observations are in line with the results of statistical analysis, which confirms that the use of Pegon Arabic text media is able to significantly improve Arabic reading ability.

Discussions

Definition of Arabic pegon Aceh

The Arabic orthography Pegon was originally used to write words in the language. (كاس ملايو) This Austronesian Malay is spoken by 290 million people covering Indonesia, Malaysia, Brunei Darussalam, Pattani, Thailand, Singapore, the Philippines, Myanmar, Sri Lanka, Cambodia, Vietnam, South Africa, and Papua New Guinea.^{7,8} In Indonesia, the Arabic orthography Pegon is widely used in several regions, such as Java, Sunda, Banten, Aceh, Riau, Madura, and Gorontalo. However, along with the times, the Pegon Arabic script is in danger of extinction, rarely studied, difficult to read, and unknown to the wider community, especially the younger generation. [7] Pegon Arabic is an Arabic script adapted to write regional languages in the archipelago, including Aceh. Variations of Pegon are spread across different regions (Java, Madura, Aceh, and others) due to local phonological adaptations to Arabic graphemes, so that each region develops distinctive conventions of letters, sounds, and writing patterns despite being rooted in the Pegon script in general.

Historical studies and linguistic studies of the archipelago show that Arabic-Malay writing, such as Pegon, has a real adaptive capacity for regional languages, including Aceh, through the process of vernacularization and grapheme reconstruction to adapt to local phonology. Acehnese Pegon Arabic can be defined as a local variant of the Pegon script used to write the Acehnese language, which allows the encoding of Acehnese phonological sounds using modified Arabic characters and diacritics. This definition is built on the general approach of Pegon as an Arabic-Malay script adapted to the languages of the archipelago and used in the context of education and religious practices in various regions, including Aceh. This understanding is also consistent with the finding that the adaptation of the Pegon script in various regions of the archipelago follows the logic of vernacularization of the local languages (e.g., Cirebon, Java, Madura, Aceh) and is supported by the study of the history of Malay Arabic writing in the archipelago. [8] Operationally, Aceh Pegon Arabic maps the sounds of Aceh to the Pegon graphem through a phonetic alignment scheme that has developed in the Pegon archipelago, in line with historical adaptation of regional languages.

Characteristics of Pegon Acehnese letters, phonemes, and graphemes

1. Pegon Aceh Pegon Aceh Letters Pegon Aceh uses the basic Arabic script as the basis of the grapheme, but with modifications to cover the lack of Acehnese sounds. This concept is consistent with Pegon mapping in other regions of the archipelago that add letters or ligatures to represent local sounds that are not present in standard Arabic. Research on the Pegon script in regional scripts (e.g., Cirebon) confirms that Pegon is adaptive to the local language through the addition of graphemes or certain variations of graphemes according to the phonetic needs of the locality. In addition, the study of the history of Malay Arabic writing shows how this script functions as a grapheme reconstruction tool for various regional languages, including Aceh, which has its own phonemic needs. Concrete examples are the use of additional letters and variations of writing to reflect the sounds of Aceh, as described in the study of cultural adaptation of the Aceh-Javanese/Madura language and a similar study on the adaptation of the Pegon script in the archipelago.
2. Phonetic Mapping Pegon Aceh phonetics demand the representation of Acehnese sounds using modified Pegon graphemes. This is in line with the general concept of Pegon, which adapts non-Arabic sounds to Arabic letters given diacritics or with additional letters (depending on regional traditions). The emphasis on the adaptation of local phonemes to Pegon Nusantara is documented through historical studies of Malay Arabic writing and examples of adaptation in other areas (which are methodologically relevant to understanding how Aceh adopted Pegon). Phonetic differences between regional languages, such as between Aceh, Javanese, and Madura, also show that local phonetic changes require adjustment of the Pegon grapheme to maintain the fidelity of the pronunciation of their respective regional languages.
3. The Aceh Pegon Graphem follows the general principle of Pegon, which is to use basic Arabic letters with

the possibility of adding graphemes for local sounds, as well as diacritics for vowels, as described in the historical study of Malay Arabic in the archipelago and examples of Pegon adaptations in different regions (including Aceh). The diversity of Pegon grapheme in various regions indicates that Aceh may have its own alef-variant and writing style that adapted Acehnese phonology through local practices, as discussed in the literature on Aceh–Javanese/Madura language adaptation and related studies.

The Essence of Mahārah al-Qirā'ah (Reading Ability)

Mahārah al-qirā'ah is the ability to read Arabic texts precisely, fluently, and meaningfully, which involves the ability to recognize letters and sounds, master pronunciation according to rules, read fluently, and understand the meaning of the text literally and inferentially. Broadly speaking, mahārah qirā'ah encompasses four dimensions of language skills—reading (qira'ah) as part of a series of Arabic maharahs that include istima' (listening), kalām (speaking), qira'ah (reading), and kitabah (writing), which have been documented in studies of Arabic language learning as core skills. [9] Various studies related to the teaching and evaluation of mahārah qirā'ah confirm that Arabic reading is not just about pronouncing letters phonetically, but also understanding the structure of the language, the meaning of the text, and its context. [10] This comprehensive understanding of mahārah qirā'ah is in line with research practices that emphasize the integration of content, methods, and technology as part of strengthening reading skills at the madrasah and university levels. [11] Components of reading in Arabic:

1. Ketepatan (accuracy)

Reading accuracy includes the correct pronunciation of Arabic letters, the pronunciation of hijaiyah letters according to makhraj, and the application of diacritical punctuation that affects vowel pronunciation. Accuracy also involves the correct interpretation of sounds of letters with local phoneme variations accommodated through the grapheme adaptation approach in mahārah al-qirā'ah learning. [12] Research on efforts to improve reading skills through the i'rāb approach shows that the use of teaching materials based on morphology/syntax analysis can improve reading accuracy by clarifying sentence structures in Arabic texts. In addition, the reading constraints identified revealed that vocabulary and vocabulary comprehension factors also affect reading accuracy, so increasing accuracy needs to combine mastery of vocabulary, context, and proper pronunciation. [13]

2. Kelancaran (fluency)

Fluency in reading refers to the ability to read with proportional speed, rhythm, and punctuality so that readers can understand the text continuously without stopping at each word or phrase. Fluency in reading is often associated with improved reading ability, including automatic processing of letters, so that the reader's focus shifts to the meaning of the text. Various studies show that an interactive, collaborative, and multimodal-based learning approach can significantly improve students' qira'ah. [14] Research related to the use of teaching aids and digital learning media shows that there is an improvement in reading skills, including the ability to form reading rhythms and fluency in pronunciation, so that learning mahārah al-qirā'ah becomes more interesting and effective for students. In addition, studies on learning strategies show that improved fluency is also associated with text-structure-based learning and directed repetitive exercises.

3. Kosakata (vocabulary)

Vocabulary mastery is an important foundation for accurate and easy-to-understand reading. Lexical comprehension allows readers to recognize words, phrases, and morphological forms in the context of Arabic texts. Research shows that vocabulary constraints are the main barriers to reading, so learning efforts must emphasize the expansion of the lexicon through contextual exercises and applied grammar learning. [15] Some studies also emphasize that combining authentic reading materials with meaning-oriented activities can improve vocabulary comprehension and overall reading ability. Technology and digital media have been proven to increase reading interest and vocabulary expansion through exposure to a broader linguistic context. Pemahaman literal

4. Literal comprehension

Literal comprehension refers to the ability to understand the literal meaning of the text being read, including the identification of key information, the summary of parts of the text, and the interpretation of the basic meaning explicitly stated. Research on learning mahārah al-qirā'ah emphasizes the importance of literal comprehension exercises through the evaluation of reading texts and direct interpretation

exercises directed at Arabic texts. An evaluation model that combines text analysis and class discussion has also been reported to improve the ability to understand the content of the text literally. [16]

5. Inferential understanding

Inferential comprehension involves the ability to read between lines, draw conclusions, interpret written intent, and connect the information in the text to its general knowledge or global context. Studies show that improving inferential comprehension requires thorough text reading practice, the use of text analysis strategies, and structured critical thinking skills. Learning methods that combine discussion and exploration of meaning through narrative/argumentative texts have been shown to improve readers' inferential abilities. [17] In addition, the application of a multimodal approach and the use of print/digital media were also found to be effective in increasing the capacity of readers to draw inferences from reading texts.

Pegon Aceh Arabic Text Media in Learning

Arabic learning at the Madrasah Tsanawiyah (MTs) level can be encouraged through the use of Arabic text media packaged in the form of Pegon Aceh as one of the regional script options to write Arabic sounds in a religious context and language literacy. Various studies on the development of mahārah qirā'ah learning media show that text-based media equipped with visual, interaction, and narrative elements can increase student engagement and the effectiveness of Arabic reading learning, including through technology-based educational approaches and authentic materials. [18] In addition, the integration of religious values through relevant teaching materials can strengthen the learning context for MT students. Short narrative text media can be a relatively accessible means of reading for MTs students, focusing on short storylines, contextual vocabulary, and simple Arabic language structures. The study of Mahārah Qira'ah learning media shows that short narrative texts with the support of meaning context play a role in strengthening literal comprehension and improving reading fluency through the connection between parts of the text. [19] In addition, the use of short narrative formats in learning media in the form of pop-up books or digital comics has been shown to increase student engagement and reading comprehension.

Dialogue as a form of Arabic interaction allows students to practice pronunciation, harmony of letter sounds, and the ability to understand the context of daily dialogue. The use of dialogue media in learning is assisted by an edutainment approach and multimedia content that increases student learning motivation and participation. Dialogue media can also be integrated with Pegon Aceh texts as a way to display conversations in an Islamic atmosphere of the archipelago that is relevant to the daily lives of students. [20]

Hikayat is an old narrative genre rich in cultural values and religious contexts. The use of hikayat as a reading text in learning mahārah qira'ah can enrich the cultural context of Aceh and the archipelago and provide reading materials with relevant cultural meaning for MTs students. [21]

Standard reading exercises, simple i'rāb exercises, and literal and inferential comprehension exercises are the pinnacle of the implementation of textual media in learning. Research on mahārah qira'ah learning media shows that text-based exercises, plus the support of visual and technological media, improve accuracy, fluency, and comprehension of texts. Experiments with media such as pop-up books and magazines also confirm that structured exercises with media support improve overall reading skills.

Principles of Using Pegon in Arabic Language Learning:

1. Media-Based Educational Approach

Pegon Aceh can be integrated as part of Arabic text learning media that is packaged in an edutainment and multimodal manner, according to the practice of developing mahārah qira'ah media, which emphasizes student needs analysis, expert validation, and product testing. This approach supports the use of Arabic texts with relevant grapheme representations through media that include interactive elements, such as quizzes, evaluations, and web-based dynamic feedback.

2. Multimodality and Interactivity

Learning media that combines text, images, animations, and interactive elements has been shown to increase students' attention, motivation, and understanding of Arabic reading, as shown by the literature on animated videos for listening and speaking, as well as other digital media that increase student engagement. The use of media such as pop-up books, digital comics, and educational magazines also confirms that multimodality effectively supports Arabic reading learning in the MTs environment.

3. Integration of Religious Content and Values

Given the religious context of learning in MTs, the principle of using Pegon in learning Arabic should relate reading materials to morals/worship and Islamic values. Research on teaching Arabic with religious value content shows the benefits of developing teaching materials oriented to Islamic values to increase student motivation, engagement, and understanding. Religious literacy, along with learning mahārah qira'ah, has also been proven to increase reading comprehension in the school environment.

4. Nusantara-Based Technology and Media Applications

The use of learning technology platforms (edutainment, digital-based collaborative learning, interactive learning platforms) can increase the effectiveness of qira'ah learning through the combination of Pegon Aceh texts with religious materials and the context of the archipelago.

The Effect of the Use of Aceh Pegon Arabic Text on Reading Ability

1. Cognitive Influence

Easier to understand letters and phonemes. The use of the Aceh Pegon Arabic text (which features basic Arabic letters with grapheme modifications for local sounds) is in line with the principle of flexibility of the Pegon grapheme, which is able to represent local sounds to be more accurately mapped to local language phonemes. The emphasis on the design of edutainment-based Mahārah Qira'ah learning media and expert-validated material support affirms that relevant grapheme representations improve students' ability to recognize letters and sounds and clarify the relationship between letters and sounds and the meaning of text. In the context of MTs learning, the results of a study on learning media rich in Arabic texts (narrative, dialogue, stories) and reading practice support show that learning that focuses on letter and sound recognition in a structured manner improves phoneme comprehension gradually. The Pegon Aceh text, which is designed as a short narrative, dialogue, story, and reading practice, facilitates decoding through a clear lexical context and lighter sentence structure for MTs learners.

2. Linguistic Influence

The adaptation of Acehnese letters into the Arabic system makes students more confident. The application of the Aceh Pegon text, which features the adaptation of the grapheme for the Acehnese sound, reflects the effort to bring together local phonology with the Arab-Malay system. Although specific empirical studies on the self-confidence of Acehnese students need further exploration, the literature on the design of edutainment-based qira'ah learning media emphasizes that grapheme representations relevant to regional languages increase the perception of readers' ability and learners' confidence in interacting with Arabic texts. The use of learning technology platforms (e.g., Alef Education) that combine local graphemes with religious materials also supports students' confidence through interactions that are relevant to the context of the archipelago. The Aceh Pegon was initiated to accommodate local sounds through additional graphemes and writing variations in line with the literature findings on the adaptation of Pegon graphemes in the archipelago (including Aceh) to represent local phoneme sounds, thus enriching the graphemic repertoire and phonology of students. Learning media that bring together Arabic texts with Acehnese graphemes through narratives/dialogues/hikayat provides progressive opportunities for strengthening phonology and graphemes through text-centered learning, morphology exercises, and fra analysis. [22]

Pegon Text as a Local Culture-Based Media

Pegon Arabic text plays an important role in improving the Arabic reading skills of students in madrasas. Conceptually, these results support the literature that reveals that texts related to local culture have an advantage in the reading process, especially when the text shows phonetic or morphological proximity to the student's regional language. Several studies in Indonesia reveal that Arabic teaching materials sourced from local wisdom can strengthen the relationship between the phonetics of Arabic letters and regional languages, thereby facilitating the process of decoding and understanding Arabic texts. These findings are also supported by other research that underscores the importance of cultural literacy in improving motivation and understanding of Arabic in schools. The local cultural context has been proven to increase the relevance of learning and student involvement in the learning process. Therefore, the results of this study expand on

previous findings by showing that Pegon is not only effective in pesantren (non-formal education contexts) but also in formal madrasas, reinforcing the evidence that Pegon has relevant educational potential in public educational institutions. [23]

In addition, these findings are in line with the theoretical approach of reading as a psycholinguistic process that involves the interaction between symbol recognition (bottom-up) and understanding meaning (top-down). Learning practice with Pegon texts facilitates both paths of the reading process: Pegon texts facilitate the recognition of Arabic letters and sounds related to the phonetics of regional languages, as well as give meaning through cultural associations that students are familiar with. This theoretical approach is in line with the literature on the interaction between decoding and understanding meaning in the reading process, as well as how cultural context reinforces these two aspects. In international studies of reading, the concept of science of reading emphasizes that decoding (bottom-up) and understanding meaning (top-down) go hand in hand to form complete literacy, especially when the material taught is relevant to the culture and context of the students.

The Pegon text, as an adaptation of the Arabic-Malay script used in the archipelago, has the potential to be a powerful learning medium when connected with the local culture. Combining Pegon with the regional cultural context can increase the relevance of the material, motivation to learn, and enrich students' cultural identity. This approach is in line with the principles of Culturally Responsive Teaching (CRT), which emphasizes the use of local cultural content as the foundation of learning and student interaction with learning materials. The literature on the development of local culture-based learning media shows benefits for student engagement, understanding, and identity formation. [24] In practice in schools/madrasas, the use of local culture-based media such as folklore narratives, dialogues, stories, and exercises has been shown to increase students' participation and understanding of culturally relevant materials. Research on the development of materials based on local wisdom also confirms that media that elevate local cultural values can enrich the language learning process. [25] This is a reading in Aceh.



Figure 1. Acehese Reading Text

This image shows the pages of the Pegon Arabic script, which are examples of reading in the learning process. The dense and consistent structure of the text provides an authentic picture of the literacy traditions of the people of the archipelago. In the context of learning, exposure to texts like this helps students improve visual accuracy, word recognition, and fluency in reading through texts that have historical and linguistic value. The following is the writing of the Acehese alphabet.

Table 1. Aceh Alphabet

ت ت ta teh	ب ب ba beh	ا alif alef
ح ح ha hah	ج ج jim jeem	ث ت tha theh
د د dal dal	خ خ kha khah	چ چ cha tchah
ز ز zai zain	ر ر ra reh	ذ ذ dzal thal
ص ص shad sad	ش ش shin sheen	س س sin seen
ظ ظ dzo zah	ط ط tho tah	ض ض dhad dad
غ غ nga	غ غ ghain ghain	ع ع ain ain
ق ق qaf qaf	ف ف pa	ف ف fa feh
ل ل lam lam	ك ك gaf	ك ك kaf kaf
و و wau waw	ن ن nun noon	م م mim meem
ي ي ya yeh	ه ه ha heh	و و va
A A <small>Jawi name Original name</small>		ث ث nya
From Arabic	From Persian	Unique to Jawi

This table image shows the Acehnese alphabet written using the Jawi script, which is an Arabic letter-based writing system that has been modified to adapt to special sounds in the Acehnese language. The table contains the shape of the letters and their phonetic variations, so that the reader can understand the difference in pronunciation between the original Arabic letters and the additional letters that are only found in the Acehnese language. The presentation of this table is very important because it helps students recognize the graphic structure of each letter systematically, from its basic shape to its phonological function. Through table media like this, students can more easily understand how the Jawi Aceh script works as a writing system, as well as become a foundation that strengthens their ability to read Pegon or Jawi script texts at the next stage.

Comparison with Previous Research

This study places local/Nusantara media as a key factor in improving literacy, student involvement, and learning quality in the context of madrassas and elementary schools in Indonesia. Previous literature studies have shown that the use of local culture-based media and archipelago practices can increase learning motivation, material comprehension, and literacy, especially if the media is adapted to the local context, cultural values, and literacy needs of students. [26] In addition, evaluating the usability of media as part of the quality of learning interventions is an important part of ensuring effective adoption in the field. [27]

1. Contribution of local/Nusantara media to improving literacy and learning engagement

Research on Gusjigang local wisdom-based media for English learning in elementary school shows that local culture-based pictorial media can improve learning activities and student engagement, as well as increase the effectiveness of vocabulary learning through relevant cultural contexts. Similar findings are supported by studies that emphasize the role of the local cultural environment as a supportive learning environment (language and cultural environment) to improve language skills, which is relevant to the multilingual and cultural context of the archipelago. [28] A study on the use of digital media in Madrasah Tsanawiyah Aceh Besar shows that religious institutions in Aceh have adopted digital learning media as part of school innovation, which supports the improvement of literacy and reading skills in the local context of Aceh.

2. Comparison with Pegon Aceh in the context of local learning and literacy

The success of Aceh Pegon in the context of Yellow Book learning and literacy in Aceh is documented through a study on the implementation of Yellow Book learning with Pegon in Aceh Islamic boarding schools/religious education. This research shows how Pegon Aceh functions as a bridge between religious theory and modern learning practices, with the direct involvement of teachers and students and the integration of materials into the curriculum relevant to the lives of Acehnese students. [29] These findings

strengthen the argument that the accentuation of Aceh Pegon can improve the understanding of Pegon Arabic as well as religious literacy in the Aceh madrasah/pesantren environment. Contextually, Acehnese literature also highlights the role of teachers in the literacy movement that integrates local culture and language literacy as part of efforts to improve students' reading skills in state madrasahs in Banda Aceh. The results of this study show that literacy driven by local cultural context can enrich learning practices and literacy in the madrasah environment, a finding that is relevant to consider the use of Pegon Aceh as a learning model outside Aceh if adapted to the local context, such as MTs Gorontalo. In addition, digital media innovation in Aceh, outlined in the study of MTs Aceh Besar, reflects that madrasahs in the Aceh region play a role as initiators of media innovation, a pattern that is relevant for MTs Gorontalo when considering the adoption of local media/Nusantara based on Pegon or other local wisdom.

3. The meaning of media evaluation and methodological implications

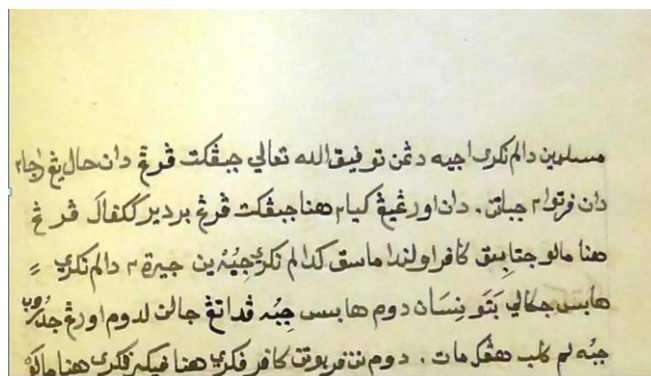
Media evaluation research in the field of education shows that sensitivity to user needs, usability, and satisfaction with media use are key factors for successful media adoption. Combined evaluation methods such as SUS (System Usability Scale) and PIECES become a powerful evaluation model to compare the performance of learning media, which can be applied to local/Nusantara media studies to ensure the effectiveness and feasibility of use in schools/madrasahs. In addition, a study on the usability of the provincial Ministry of Religion's website and online learning media confirms that the institutional context, accessibility, and interface design that meet the needs of students and teachers strongly support the effectiveness of learning media in the archipelago. [30] These evaluation models are relevant to compare the results of this study with previous studies because they both emphasize the importance of cross-platform evaluation and the context of media use (physical and digital) in Indonesian education. Findings from studies that assess interactive media and multimedia-based media in language learning and other subjects reinforce the claim that local/archipelago media have the potential to improve learning outcomes when culturally and pedagogically adjusted, and systematically evaluated on usability and learning impact. [31]

4. Implications for MTs Gorontalo and further research suggestions

From the synergy between Pegon Aceh and learning media based on local wisdom, the results of the literature show that MTs Gorontalo can consider two strategic directions: (a) adopting Pegon Aceh as a learning path of the yellow book/Arabic Pegon adapted to the local culture of Gorontalo, with teacher training and strengthening of Pegon curricular materials; (b) integrating Nusantara media based on local culture (as well as the local culture of Gorontalo) to improve Arabic, Indonesian, and religious literacy holistically. The addition of literature on the use of Pegon Aceh outside Aceh and the integration of local media can be a relevant further research area for MTs Gorontalo, especially in learning evaluation studies that compare various media (local culture-based print media, interactive digital media, and Pegon Aceh) with comprehensive evaluation frameworks such as SUS/PIECES to strengthen claims of effectiveness.

MANUSCRIPT ATTACHMENTS

1. An Ancient Manuscript Written by Sheikh Abbas Kutakarang, Who Lived at the Same Time as Tgk Chik in Tiro Muhammad Saman



2. Manuscript of a collection of Arabic sermons from Aceh



Conclusions

This study shows that the use of Pegon Aceh Arabic Text media is able to have a significant influence on the improvement of reading ability (mahārah al-qirā'ah) of grade VIII students of MTs Al-Huda Gorontalo City. This media makes it easier for students in the process of letter recognition, decoding text, and understanding the content of reading through writing forms that are closer to the phonetic patterns they are familiar with. This improvement proves that a learning approach based on linguistic proximity can strengthen the student learning process more effectively than the conventional approach that has been used.

In addition to having an impact on the cognitive aspect, the use of the Aceh Pegon Arabic Text also shows a strong pedagogical appeal because it is able to increase student involvement and motivation in learning. The presence of media rooted in the archipelago's Islamic literacy tradition makes learning more relevant and meaningful for students, thus creating a learning experience that not only builds technical reading skills but also enriches their appreciation of local cultural treasures. This provides important added value in the context of the Independent Curriculum, which emphasizes contextual and culture-based learning.

These findings have significant relevance for the development of Arabic language learning, as they offer empirical evidence that the use of media based on local wisdom can be an innovative strategy that is effective and worthy of being integrated into the madrasah curriculum. In the midst of limited research on Aceh Pegon, this result makes an original contribution by expanding the scope of the study of Pegon, which was previously dominant in the Javanese and Madura traditions. Thus, this research not only answers research questions completely but also open up new spaces for educators and researchers to explore culture-based learning media as a promising approach in improving students' religious and language literacy competencies.

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